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Monkeypox Update

The Arkansas Department of Health (ADH) wants to update healthcare providers in Arkansas on the expanding national and international outbreak of Monkeypox. Over the weekend, the WHO declared the outbreak a "public health emergency of international concern" after reporting there have now been over 16,000 cases across 70 countries so far. In the U.S., the CDC currently reports 3,846 cases across 45 states. Arkansas has so far had 4 cases of monkeypox diagnosed in residents. The vast majority of cases worldwide and in the U.S. have been diagnosed among men who have sex with men (MSM). However, last Friday CDC reported the first 2 confirmed pediatric cases in the U.S., as well as a small number of infections among pregnant women, highlighting the need for clinicians to consider the diagnosis in anyone with skin lesions or symptoms typical of monkeypox, including but not only MSM.

Monkeypox virus, a zoonotic orthopox DNA virus related to the virus that causes smallpox, was first described in humans in 1970 in the Democratic Republic of Congo (formerly Zaire). Sporadic outbreaks of infection have been reported in Africa, typically originating from contact with wildlife reservoirs (particularly rodents). Such outbreaks and travel-associated cases outside Africa have had limited secondary spread, and therefore human-to-human transmission had been deemed inefficient. The current global outbreak of monkeypox virus infection in humans suggests changes in biologic aspects of the virus, changes in human behavior, or both; such changes might be driven by waning smallpox immunity, relaxation of coronavirus disease 2019 (Covid-19) prevention measures, resumption of international travel, and sexual interactions associated with large gatherings. To date, the current spread has disproportionately affected men who are gay or bisexual and other MSM.

Presenting symptoms typically include fever, chills, the distinctive rash, or new lymphadenopathy; however, onset of perianal or genital lesions in the absence of subjective fever has been reported. The rash associated with monkeypox involves vesicles or pustules that are deep-seated, firm or hard, and well-circumscribed; the lesions may umbilicate or become confluent and progress over time to scabs. The rash associated with monkeypox can be confused with other diseases that are encountered in clinical practice (e.g., secondary syphilis, herpes, chancroid, and varicella zoster). However, a high index of suspicion for monkeypox is warranted when evaluating people with a characteristic rash, particularly for men who report sexual contact with other men and who present with lesions in the genital/perianal area or for individuals reporting a significant travel history in the month before illness onset or contact with a suspected or confirmed case of monkeypox. Some patients with monkeypox have presented with a single anogenital lesion. For a helpful study discussing the clinical characteristics of over 500 monkeypox cases in the current outbreak, see this NEJM article.

Testing capacity for orthopoxviruses within the U.S. has increased greatly in the last few weeks. Five large commercial laboratories are now performing orthopoxvirus PCR/molecular testing (LabCorp, Quest, Aegis, Sonic Healthcare, and Mayo labs), and providers are able to send samples from patients to these labs. If you use one of these labs, please consult with them for their sampling and submission criteria. ADH's Glen F. Baker Public Health Laboratory (PHL) can perform molecular testing of 20 specimens per day. If you suspect a patient has monkeypox and desire to test through the PHL, please call (501) 537-8969 during business hours and ask to consult an Outbreak Response nurse. Attached, please find instructions for specimen sampling and handling. Specimens should only be taken from skin or mucosa lesions at the present time. Providers who plan to test through a commercial lab do not need to contact ADH prior to testing.

Most people infected with monkeypox virus have a mild, self-limiting course of illness and require no therapy. However, treatment with tecovirimat (TPOXX), an antiviral with FDA approval for smallpox, is available from CDC via an expanded access protocol as an Investigational New Drug on a case-by-case basis. Treatment should be reserved for those with severe disease, those at high risk of developing severe disease (immunocompromised, pediatric < 8yo, pregnant/breastfeeding, hx of atopic dermatitis or other exfoliative skin condition, or with a disease complication), and those with infections involving they eyes, mouth or other anatomic areas which might constitute a special hazard (e.g., anus or genitals). Please see CDC's webpage on clinical treatment for full details. If you think your patient meets criteria for treatment and you would like to prescribe TPOXX, please call (501) 537-8969 during business hours and ask to consult with an Outbreak Response nurse. After hours, call (501) 661-2136 and ask to speak to the physician on call about TPOXX prescription.

Jynneos vaccine is a non-replicating live virus vaccine FDA approved as prophylaxis against monkeypox and smallpox. It is given as a series of 2 subcutaneous injections with an interval of 28 days. At present, ADH has a limited supply of Jynneos vaccine which can be used as Post-Exposure Prophylaxis (PEP) for those with close/intimate contact, including sexual contact, within the last 14 days to someone diagnosed or suspected to have monkeypox. It can also be given to those who had a high-risk encounter within the last 14 days in a setting or at an event where monkeypox was reported to be spreading, also known as "expanded PEP" or "PEP ++". If you have a patient who meets criteria and wants to be vaccinated, please call (501) 537-8969 and ask to speak to an Immunization or Outbreak nurse.

Sources:

- Monkeypox Virus Infection in Humans across 16 Countries --- April-June 2022; Thornhill et al;
 July 21, 2022; DOI: 10.1056/NEJMoa2207323
- https://www.cdc.gov/poxvirus/monkeypox/index.html
- https://www.cdc.gov/poxvirus/monkeypox/clinicians/index.html
- https://www.cdc.gov/poxvirus/monkeypox/clinicians/treatment.html
- https://www.cdc.gov/polio/what-is-polio/hcp.html

For a CDC Presentation titled for clinicians titled "Monkeypox Outbreak: Updates on Epidemiology, Testing, Treatment, and Vaccination", go to this link and look under "Call Materials".